In the Specification

Please replace the paragraph beginning on page **6**, line **4** with the following:

Fig. 1 illustrates an example of a packet reorder buffer 100 according to one embodiment of the present invention. Packet reorder buffer 100 includes 'n' locations, locations 105(1)-(n). Packet reorder buffer 100 can be implemented in any storage technology (e.g., dynamic random access memory (DRAM), static random memory (SRAM), or the like). Each buffer location can be further configured into three fields. It will be apparent to one of the skill in the art that, while specific fields are described, the buffer locations can be configured into any appropriate number of fields. A status field 110(X) defines the status of location 105(X) or the status of a packet stored in location 105(X). X can be any number from 0-n. The length of status field 110(X) can be configured according to a number of states defined for location 105(X). For illustration purpose, in the present example, the length of status field 110(X) is configured to represents states 'empty', 'ready' and 'not-ready'. However, any number of states for location X can be defined to represent the status of location 105(X) and the data stored therein (e.g., intermediate states like writing, reading, forwarding or the like). At initialization, status field 110(X) depicts a code representing that the buffer location 105(X) is 'empty'. A packet field 130 (X) stores incoming packets. The length of packet field 130(X) can be determined according to a size of incoming packet defined by the communication protocol employed by the router. A hash field 130(X) stores a hash value for the incoming packet stored at packet field 120(X) in location 105(X). The hash value can be determined according to a number of methods known in the art. In this example, for illustration purpose, the hash value is determined based on the destination address of the incoming packets. However, **the** hash value can be determined using a number of parameters (such as, for example, source address, incoming port, type of protocol used and the like or combination thereof).

Please replace the paragraph beginning on page **8**, line **29** with the following:

The router searches packet reorder buffer 200 for packets that are ready for further processing. Packet A1 is HOL packet and not ready thus the router cannot process packet A1.

Packet B1 is ready. Packets A1 and B1 are from different flow sets. Packet B1 is the first packet in the sequence of Hash-B packets. Packet B1 is expected to arrive first at destination Hash-B. Thus, if packet B1 is forwarded before packet A1, there will not be an out-of-order network error at destination Hash-B. The router removes packet B1 from packet reorder buffer 200 and forwards packet B1 for further processing and forwarding to the next hop. Similarly, packet B2 can be processed after packet B1 and forwarded to the next hop. However, because packet B1 precedes packet B2 and both packets are destined for a common destination, packet B2 can not be processed before packet B1. Next, packet A2 is ready to be ~~processed~~**processed;** however, packet A1 precedes packet A2 and is in the 'not-ready' state. Thus, packet A2 cannot be processed before packet A1. Packet A3 and packet B3 are in 'not-ready' and cannot be processed.

Please replace the paragraph beginning on page **9**, line **25** with the following:

Fig. 2C illustrates an example of packet reorder buffer 200 after two more packets are processed according to one embodiment of the present invention. Locations **[[1, 4]]**1-4 and 6 are empty. Packet A3 is in the 'not-ready' state. Because packet A3 is now the 'oldest' packet in packet reorder buffer 200, HOL packet pointer 240 points to packet A3 as the HOL packet. Conventionally, the router would not have processed any packet until packet A1 became ready for processing. According to embodiments of the present invention, packets from different flow sets can be processed out-of-order when the packets are ready to be processed in packet reorder buffer 200. Packets within a particular flow set are processed in order. Thus, incoming intra flow set packet order is maintained however, packets can be processed out-of-order with respect to incoming inter-flow set packet order.

Please replace the paragraph beginning on page **10**, line **30** with the following:

Fig. 3 illustrates an example of a packet reorder buffer system ("system") 300 according to one embodiment of the present invention. System 300 includes a processor 310. Processor 310 is coupled to various elements of system 300 via a link 315. When system 300 receives a data packet (e.g., a data packet 305), system 300 stores data packet 305 in a packet receiving unit 320. Packet receiving unit 320 is coupled to a cache 330 via a link 325 and a packet reorder buffer **[[360]]**350 via a link 327. Processor 310 calculates a hash value for data packet 305 and stores

the hash value and the data portion of data packet 305 in packet reorder buffer **[[360]]350**. Cache 330 stores the routing information for frequently-encountered destinations. Cache 330 is coupled to a memory 340 via a link 335 and to a packet reorder buffer 350 via a link 337. Memory 340 includes a lookup table 345. Lookup table 345 stores routing information for destinations in the network. Memory 340 is coupled to packet reorder buffer 350 via a link 347.